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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,660	03/18/2004	Frederic Bauchot	FR920020086US1	6005

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TSUI, WILSON W	

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/803,660	BAUCHOT, FREDERIC	
	Examiner	Art Unit	
	Wilson Tsui	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2006*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 12-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 12-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on: 7/14/2006.

2. Claims 1, and 3 – 9 have been amended, claims 10 and 11 have been cancelled, and claims 12-19 are new. Thus, claims 1-9 and 12-19 are pending, and claims 1, 12, and 16 are independent claims.

3. The rejections for claims 1 and 2 under 35 U.S.C. 112 have been withdrawn.

4. The rejection for claim 11 under 35 U.S.C. 101 has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4, 6, 8, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salas et al (US Patent: 5,317,686, published: May 31, 1994) in further view of Hatakeda et al (US Patent: 6,057,837, published: May 2, 2000, filed: Jul. 15, 1997).

With regards to claim 1, Salas et al teaches a method for data entry into the content of cells belonging to an output field, said data being expressed as a mathematical expression of the cell contents of at least one input field in a data multidimensional table used by a data management application, said table comprising cells arranged as a grid of records and fields, each cell corresponding to the intersection of one record with one field, each cell being identified by a cell address and comprising

a cell content, said table having one specific record in which each cell content is entered as a unique character string label identifying each table field, said method comprising the steps of:

a) *Entering labels corresponding to the at least one input field and a label corresponding to the output field, said later label being expressed as the mathematical expression of said labels of said at least one input field* (column 8, lines 6-26: whereas, each cell is identified by a cell name/label, and mathematical expressions are expressed for a cell, using values from other cells (input cells)). Furthermore, the mathematical expressions assigned for an output field comprise one or more labels assigned to one or more input fields (Fig. 4a, reference number 45).

b) *Parsing the label of the output field into a mathematical expression by identifying the numeric operands, the operators and the at least one existing input field label* (column 12, lines 35-57, Fig. 4a, reference number 45: whereas, item names/input labels are parsed in the mathematical expression, along with "numeric values, textual values, reference notations, and mathematical operators/functions").

c) *Translating in the mathematical expression, the at least one existing input field label into the address of the cell containing the at least one input field label* (columns 15 and 16, lines 63-68 and 1-4 respectively: whereas, the textual address of a cell (input field label) is translated into an address of the cell (index map address).)

d) Pasting the result of the mathematical expression used for the output field(s), from values of input cell(s) belonging to the same record (Fig. 4a: whereas, the values computed in an output cell are derived from each record's input cell value. For example,

each record is represented by the "box" formed by intersecting the 'Sports' category and the 'Ford' category).

However, although Salas et al teaches translating labels for an input cell for a particular record as explained above, Salas et al does not teach for each cell of the output field, *pasting in the cell content the translated mathematical expression and replacing in said pasted mathematical expression each cell address of the at least one input field label by the cell address of the at least input field belonging to the same record.*

Hatakeda et al teaches for a *pasting in the cell of an output field, a mathematical expression* showing *each cell address of* at *least one input field belonging to a same record* (Fig. 3d, reference number 102').

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Salas et al's method for parsing a mathematical expression and translating input field labels for each record to further use the same data to paste a mathematical expression containing input field addresses for a particular record as taught by Hatakeda et al. The combination of Salas et al and Hatakeda et al would have allowed Salas et al to have reduced "the labor involved in editing references in cell data" (column 5, 1-2).

With regards to claim 2, which depends on claim 1, Salas et al teaches a method for *replacing the output field cell contents by the computed mathematical expression applied to the cell contents corresponding to the cell addresses of the at least input field*

belonging to the same record, as similarly explained in claim 1, and is rejected under the same rationale.

With regards to claim 3, which depends on claim 1, Salas et al teaches a method for *repeating the preceding steps to compute the content of the cells of any additional output field in the table, wherein said content can be expressed as a mathematical expression of the cell contents of at least one input field* (Fig. 4a: whereas, there are multiple records that also use the mathematical expression in reference number 45. All these records are shown to have been computed, and thus as shown, the steps for computing have been repeated for multiple output cells as well).

With regards to claim 4, which depends on claim 1, Salas et al teaches a method wherein *the step of parsing the label includes a transformation of cell content type from a character string into a computable mathematical expression* (Fig 4a: whereas, a character string from the output label (reference number 28), is parsed to determine the validity of the expression (column 12, lines 12-14), and also broken down into a computable mathematical expression by "combining numeric values, textual values, reference notations, and mathematical operators/functions" and stored into appropriate output cells (column 12, lines 46-53)).

With regards to claim 6, which depends on claim 1, Salas et al teaches a method *further comprising an initial step of selecting the input and output fields forming the data multidimensional table in a larger data multidimensional table* (column 10, lines 49: whereas, the selection of input and output fields selected/referenced by using an

expandable referencing scheme, such that the input/output fields can be selected in a larger multidimensional table).

With regards to claim 7, which depends on claim 1, Salas et al teaches a method wherein *after the step of entering labels, the following steps are executed only if a further step of starting computation of the cell contents of the output field is triggered* (column 18, lines 29-34: whereas, the computation of cell contents are triggered when the "structure of dimensions, the number of dimensions, or any user-supplied mathematical expressions are changed by the user, the math module is invoked" to compute the cell contents of affected output cells).

With regards to claim 8, which depends on claim 1, Salas et al teaches a method wherein *the fields and records are respectively the columns and rows if the data multidimensional table is vertically arranged or are respectively the rows and columns when the data multidimensional table is horizontally arranged* (Fig. 3a).

With regards to claim 12, Salas et al teaches a computer program product comprising:

Code means for entering a first label into the at least one input column and a second label into the at least one output column, the second label being, a mathematical expression that includes the first label and at least one operator: (column 8, lines 6-26: whereas, each cell is identified by a cell name/label (*into an input column*, since the cell resides within the input column), and mathematical expressions are expressed for an output cell, using values from other cells (input cells)). Furthermore, a second label comprising mathematical expressions are assigned for an output field (*into an output*

column, since the cell/output field resides within the output column), which further comprise one or more labels assigned to one or more input fields (Fig. 4a, reference number 45:whereas, there are at least two input columns, and a mathematical expression can reference cells from more than one input column). Additionally, item names/input labels are parsed in the mathematical expression, along with "numeric values, textual values, reference notations, and mathematical operators/functions" (column 12, lines 35-57, Fig. 4a, reference number 45).

Code means for automatically entering data into the second row at a location under the second label upon entry of data by a user into the second row at a location under the first label, the data automatically entered being a result of a mathematical operation as defined by the mathematical expression in the second label wherein the data entered by the user replaces the first label in the mathematical expression (Fig. 5a: whereas, the second label 'Total" comprises a mathematical expression for summing all input cells for each record, and the result data is entered below the second label. Furthermore, "the particular value stored in a cell can be specifically supplied by the user or computed as directed by user supplied mathematical expressions" (column 8, lines 15-26: whereas, the mathematical expression includes values from input columns, as also shown in Fig 4a). Lastly, the value supplied by the user in an input field is used in place of the label of the cell in the mathematical expression *(columns 15 and 16, lines 63-68 and 1-4 respectively: whereas, the textual address of a cell (input field label) is translated into an address of the cell (index map address)*, to automatically calculate the output values shown in Fig. 5a.)

With respect to claim 13, which depends on claim 12, Salas et al teaches *wherein when the table has two or more input columns, two or more labels are used to define the two or more input columns, the second label, as a mathematical expression, includes the two or more labels such that when the user enters data into the second row at a location under the two or more labels, the data automatically being entered into the second row at a location under the second label is a result of a mathematical operation as defined by the mathematical expression in the second label*, as similarly explained in the rejection for the claim 12, and is rejected under the same rationale.

With respect to claim 14, which depends on claim 12, Salas and teaches:

- *Code means for parsing the second label to identify operands, and the at least one operator of the mathematical expression,* as similarly explained in the rejection for claim 1, and is rejected under the same rationale.
- *Code means for translating the mathematical expression into code, as similarly explained in the rejection for claim 1*, and is rejected under the same rationale.
- *Code means for entering the code, into which the mathematical expression is translated, into the second row at a location under the second label before data is entered into the table*, as similarly explained in the rejection for claim 1, and is rejected under the same rationale.

With respect to claim 15, which depends on claim 14, Salas and Hatekeda et al teaches wherein data is automatically entered into the second row at the location under the second label when triggered to do so, as similarly explained in the rejection for claim 1

(since the data entered in the second row is entered upon user request for viewing data), and is rejected under the same rationale.

With regards to claim 16, for a system performing a method similar to the method of claim 1, is rejected under the same rationale.

With regards to claim 17, which depends on claim 16, for a system performing a method similar to the method of claim 13, is rejected under the same rationale.

With regards to claim 18, which depends on claim 15, for a system performing a method similar to the method of claim 1, is rejected under the same rationale.

With regards to claim 19, which depends on claim 18, for a system performing a method similar to the method of claim 15, is rejected under the same rationale.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salas et al (US Patent: 5,317,686, published: May 31, 1994) and Hatakeda et al (US Patent: 6,057,837, published: May 2, 2000, filed: Jul. 15, 1997), in further view of MATHCAD (MathSoft Inc., published: August 1999, pages 140-141).

With regards to claim 5, Salas et al teaches a method wherein, the mathematical expressions used for the output cells include mathematical operators and functions (column 12, lines 46-53). However, Salas et al does not teach *wherein the mathematical expression comprises complex operators developed as functions in the data management application.*

MATHCAD teaches a method wherein *the mathematical expression comprises complex operators developed as functions in the data management application* (pages

140-141: whereas, customer operators are defined (page 140) and developed as functions and are used in a data management application (page 141)).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Salas et al's system such that the mathematical expressions included custom defined operators developed as functions as taught by MATHCAD. The combination of Salas et al, Hatakeda et al, and MATHCAD would have allowed Salas et al's system to have allowed users the convenience of using custom defined operators without explicitly defining frequently used or complex mathematical functions/expressions.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salas et al (US Patent: 5,317,686, published: May 31, 1994) and Hatakeda et al (US Patent: 6,057,837, published: May 2, 2000, filed: Jul. 15, 1997), in further view of Hashemi (US Application: US 2003/0212804 A1, published: Nov. 13, 2003, filed: May 9, 2002).

With regards to claim 9, which depends on claim 1, Salas et al teaches a method for:

a) Selecting cells in a multidimensional table, as explained in the rejection for claim 6.

b) *Selecting a record*, as explained in the rejection for claim 1, and is rejected under the same rationale.

However Salas et al does not teach a method for selecting *the specific record in the data multidimensional table is respectively the top record in a vertically arranged table and the first left record in a horizontally arranged table.*

Hashemi teaches selecting a *record in a multidimensional table is respectively the top record in a vertically arranged table* (paragraph 0091: whereas, the top row is selected).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Salas et al's record selection system to have further used the method of selecting a top record in a vertically arranged table as taught by Hashemi. The combination of Salas et al, Hatekeda et al, and Hashemi would have allowed Salas et al's system to have used a method of data access in the order of how the multidimensional table records were listed (vertically).

However, Salas et al and Hashemi do not teach accessing the first left record in a horizontally arranged table. Nevertheless the method of transposing rows to columns, is notoriously well known in the art. The Examiner takes OFFICIAL NOTICE of this teaching. It would have thus been obvious to one of ordinary skill in the art, having the teachings of Salas et al, Hatekeda et al, and Hashemi before him at the time the invention was made, to have modified the method for accessing a top record in a vertically arranged table, taught by Salas et al, Hatekeda et al, and Hashemi; to further have implemented a transposed method of accessing the same record in a vertically arranged table, as is known in the art. It would have been advantageous to one of ordinary skill to have utilized this combination such that the method of data access was in the order of how the multidimensional table records were listed (horizontally).

Response to Arguments

8. Applicant's arguments filed 7/14/2006 have been fully considered but they are not persuasive.

9. With regards to claim 1, the applicant first argues Salas et al does not teach "using a label expressed as a mathematical expression *that includes another label to label a column in a table and at least one operator*". However, the claim only requires "said later label being expressed as the mathematical expression of said labels of said at least one input *field*".

The definition of a field in database terms, includes: referring "specifically to the single item that exists at the intersection between one row and one column" (Wikipedia.org, http://en.wikipedia.org/wiki/Column_(database)). Additionally, the claim requires a field, and a "field value" (which is a specific form of a field, and thus falls under the scope of a field), has already been taught in the rejection for claim 1, where an output column, includes an output field value for a particular row/record. The applicant' also fails to provide an explanation as to why Salas et al does not teach "and at least one operator". Thus, the applicant's arguments are considered non-persuasive with respect to the first argument.

The applicant secondly argues that Salas et al does not teach "automatically entering data into the second row at a location under the second label upon entry of data by a user into the second row at a location under the first label, "*the data automatically entered being a result of a mathematical operation as defined by the mathematical expression in the second label*". Yet, the claim does not require

"*automatically entering data ...*", and thus, argument is considered non-persuasive with respect to the second argument.

The applicant thirdly argues, Hatakeda et al does not teach "using a label expressed as a mathematical expression *that includes another label to label a column in a table and at least one operator to label a column in a table* ". However, the claim only requires "said later label being expressed as the mathematical expression of said labels of said at least one input *field*". Thus, in light of the explanations for the definition of a field, and the teachings of a field value as explained above, the applicant's arguments are considered non-persuasive with respect to the third argument.

The applicant fourthly argues, Hatekeda et al does not teach "automatically entering data ...". Yet, the claim does not require "automatically entering data ...", and thus, the argument is considered non-persuasive, with respect to the fourth argument.

Lastly, the applicant argues that the mathematical expressions taught by Salas et al are not used as labels to columns as claimed. Yet. Salas et al does provide an implementation for the mathematical expression being used as a label as illustrated in Fib. 2b, whereas, The column 'Total' is a label that as defined by a formula in 36. And thus, it is easily shown that 'Total' is implemented with the labeled mathematical expression.

10. Applicant's arguments with respect to claims 12-19 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendments.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wilson Tsui whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W. T. 9/15/06

Wilson Tsui
Patent Examiner
Art Unit: 2178
September 15, 2006

STEPHEN HONG
SUPERVISORY PATENT EXAMINER